June 2024 Monthly Weather Report

This document provides a summary of the UK's weather and climate statistics for June 2024.

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UK overview

In contrast to the warmer than average May, June was cooler than average, with temperatures in the first two weeks roughly 2°C below average. The cool start to the month was due to northerly and northwesterly winds bringing cold Arctic air across the UK. A low pressure centre developed over Scandinavia in the second week of June, pushing further cold air from the north across the UK. Frontal systems brought scattered showers across the country throughout the month, but in general the showers were light and brief, although there were occasional thunderstorms especially in the south-east. From the 24th to the 27th, a period of high pressure brought warm temperatures across the UK. Some areas of south-east England experienced temperatures exceeding 28°C. Several stations recorded temperatures of 30°C on the 26th, including Heathrow and Wisley (Surrey). However, the hot weather was short-lived, and temperatures returned to around or below average for the last few days of the month.

By mid-month, the mean temperature for the UK was 2.2°C below the June average. However, the warm spell that closed out the month balanced this, resulting in mean temperatures only 0.4°C below the average for the UK. All four countries ended the month with mean temperatures less than a degree below average. Although cool, June wasn't as wet as previous months, with the UK provisionally recording only 71% of the average June rainfall. England and Wales both recorded just over half of their average rainfall, while Northern Ireland recorded 74% of their average. Scotland was only slightly below average with provisionally 98% of the typical rainfall, and northern Scotland was the only region to end the month with above average rainfall, experiencing a provisional 122mm of rain (132% of the average rainfall). The sunshine hours were slightly above average for the UK (178.8 hours, or 104% of the average sunshine duration). However, Northern Ireland was much duller, recording only 75% of the average June sunshine hours.

Reference climatology used for calculating anomalies is the period 1991-2020 unless otherwise stated.

Weather impacts

- **Cool and often showery weather in the first half of the month, with westerly to north-westerly winds prevailing**
- **Hot spell between the 23rd and 26th with many areas in southeastern England seeing temperatures over 28°C**

June saw little in the way of impactful weather, with only four severe weather warnings issued, all of which were low impact. The month started with cool and often showery weather, with winds from the west and northwest bringing cold air over the UK.

The cool air also led to a dry month, with the exception of northern Scotland. The most impactful day was the 18th, when a pronounced convergence line formed between Cumbria and Yorkshire, leading to heavy downpours which resulted in some surface water issues and flooded roads across parts of West Yorkshire.

Dry conditions in the south of the UK, as well as strong sunshine, likely contributed to a heathland fire near Exmouth, Devon on the 20th.

Higher pressure in the latter half of the month led to the only hot spell in June between the 23rd and 26th, when temperatures peaked at 30.5°C in Wisley, Surrey.

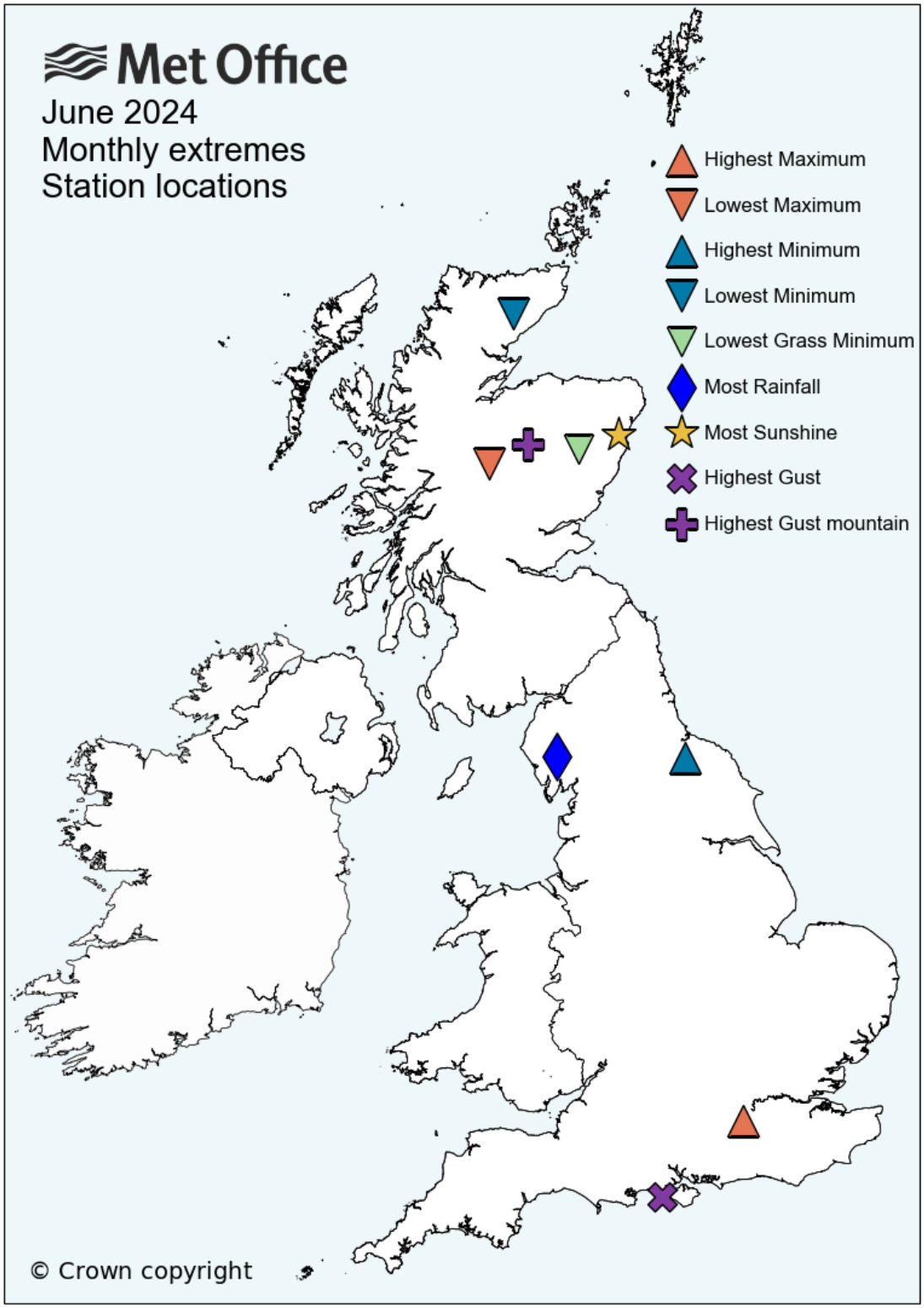
Monthly extremes

The table below lists UK monthly weather extremes recorded at individual weather stations during June 2024 from data available on 02/07/2024. The map shows the location of these stations.

Highest Maximum	**30.5°C** on **26th** at Wisley (Surrey, 38mAMSL)
Lowest Maximum	**8.6°C** on **10th** at Dalwhinnie No 2 (Inverness-shire, 351mAMSL)
Highest Minimum	**18.2°C** on **25th** at Carlton-in-cleveland (Cleveland, 103mAMSL)
Lowest Minimum	**-1.6°C** on **13th** at Kinbrace, Hatchery (Sutherland, 103mAMSL)
Lowest Grass Minimum	**-4.2°C** on **6th** at Aboyne No 2 (Aberdeenshire, 140mAMSL)
Most Rainfall	**51.2mm** on **13th** at Mickleden, Middlefell Farm (Cumbria, 99mAMSL)
Most Sunshine	**16.1hr** on **24th** at Dyce (Aberdeenshire, 65mAMSL)
Highest Gust	**55Kt 63mph** on **15th** at Wight: Needles Old Battery (Isle Of Wight, 80mAMSL)
Highest Gust (mountain*)	**77Kt 89mph** on **4th** at Cairngorm Summit (Inverness-shire, 1237mAMSL)
Greatest Snow Depth at 0900 UTC	No non-zero values.

mAMSL refers to station elevation in metres above mean sea level.

*Mountain stations are above 500mAMSL.


Met Office
June 2024
Monthly extremes
Station locations
Highest Maximum
Lowest Maximum
Highest Minimum
Lowest Minimum
Lowest Grass Minimum
Most Rainfall
Most Sunshine
Highest Gust
Highest Gust mountain
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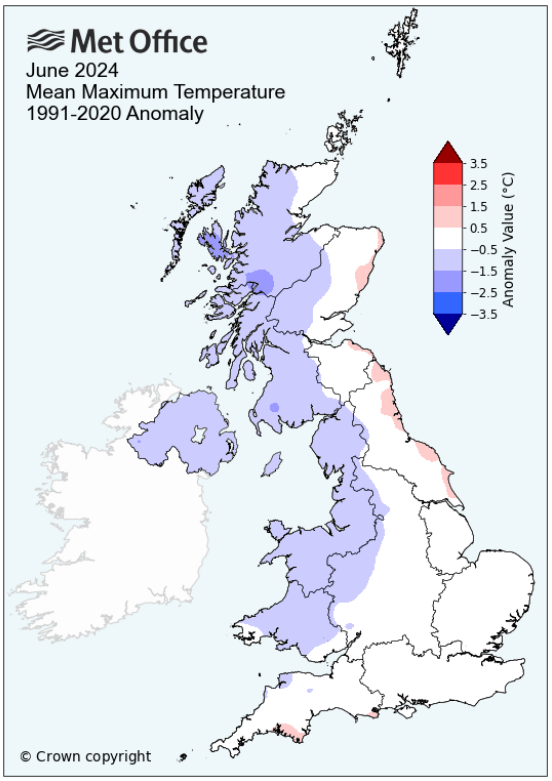
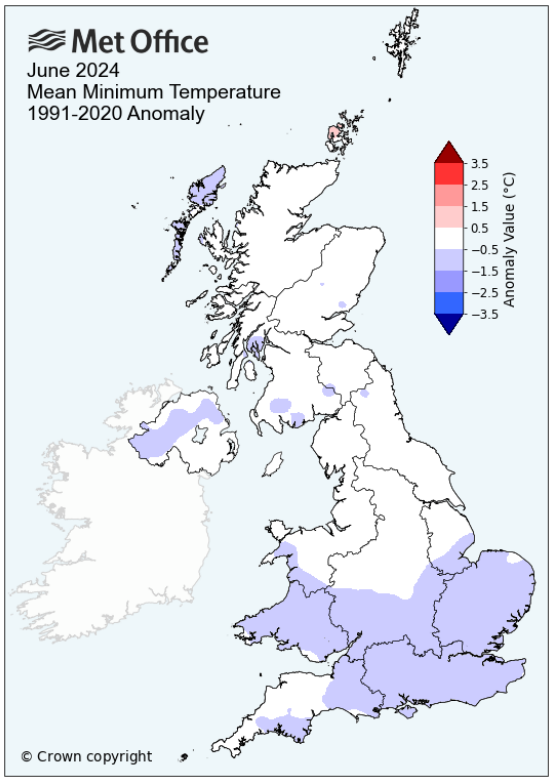
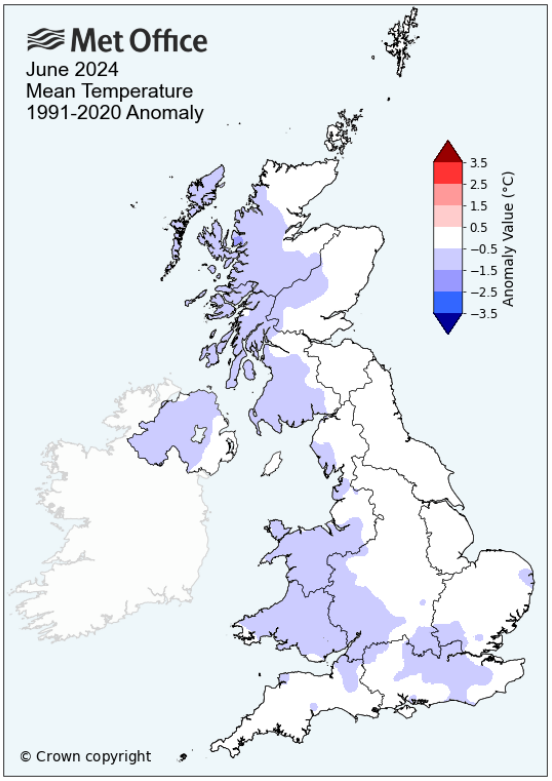
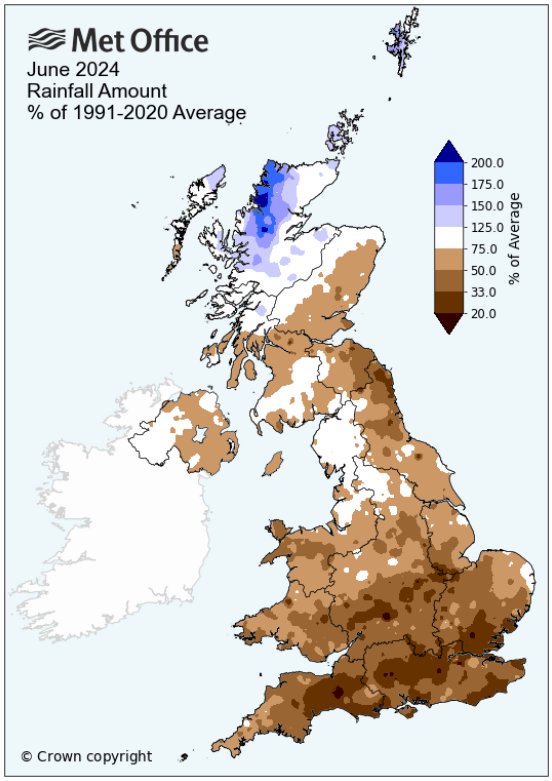
Monthly maps

These maps show monthly average daily maximum, monthly average daily minimum and monthly mean temperature and monthly rainfall for June 2024 as anomalies relative to the June 1991-2020 long term average.

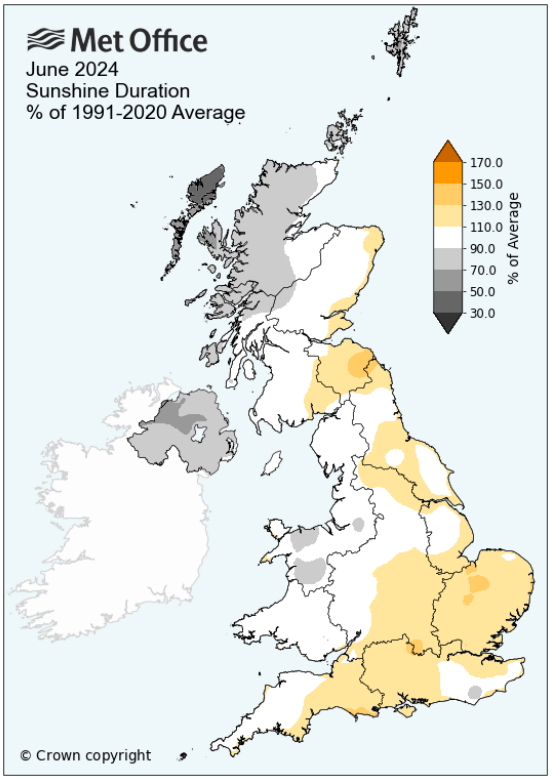


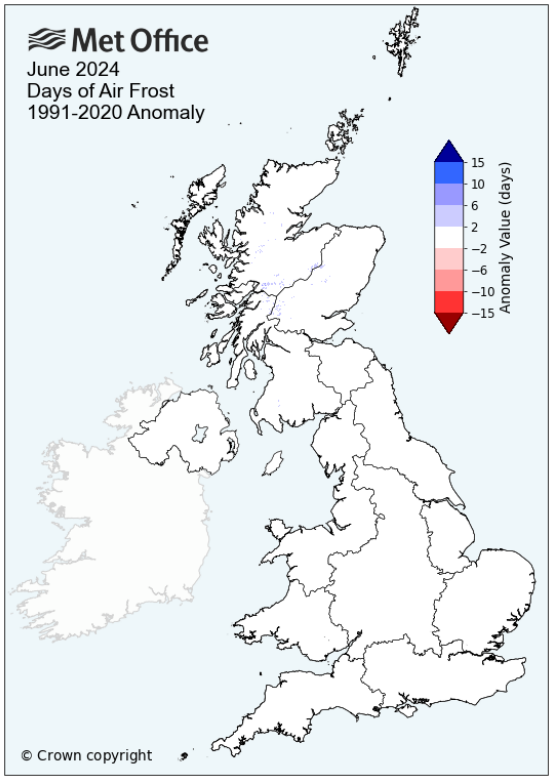


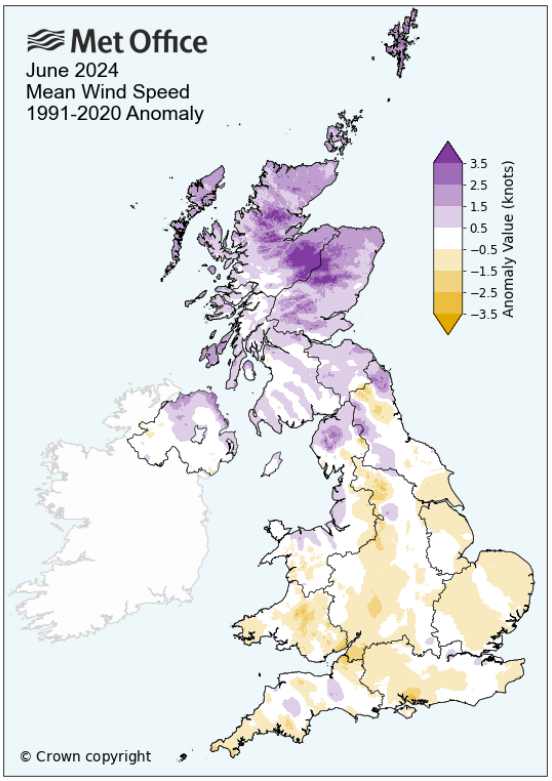


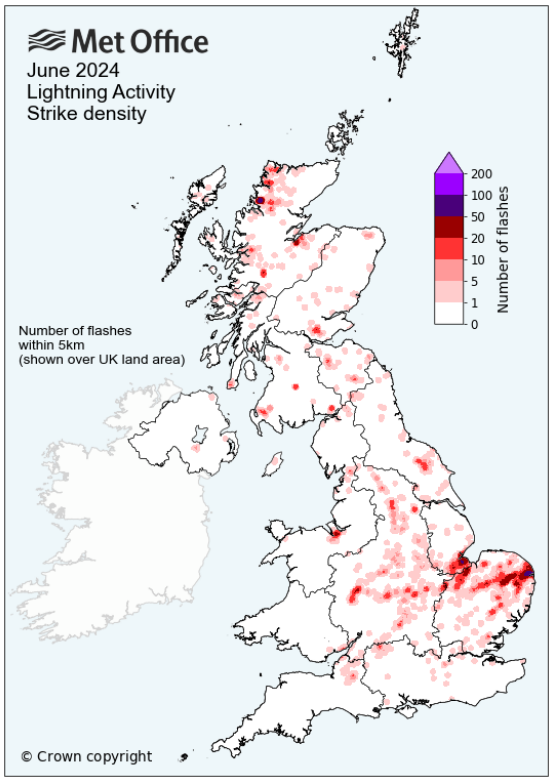


These maps show monthly sunshine, monthly air frost and monthly windspeed for June 2024 as anomalies relative to the June 1991-2020 long term average, plus a map showing lightning activity as the number of strikes within a 5km radius of any land location.









Monthly climate statistics - actuals and anomalies

These tables show the UK and national climate statistics for June 2024 for max, min and mean temperature, rainfall, sunshine and windspeed as actual values and anomalies relative to the June 1991-2020 long term average. The position of the value within the full series (in both ascending and descending order) is shown in the two 'Rank' columns. Central England Temperature (CET) and England & Wales Precipitation (EWP) are also included.

Mean maximum temperature

Region	Maxtemp (°C)	1991-2020 Anomaly (°C)	Rank - warmest	Rank - coldest	Series length (yrs)
UK	17.3	-0.4	74	68	141
England	18.9	-0.1	55	87	141
Wales	16.9	-0.8	86	56	141
Scotland	14.9	-0.7	92	50	141
Northern Ireland	16.2	-1.0	94	48	141
Central England	18.8	-0.4	77	71	147

Mean minimum temperature

Region	Mintemp (°C)	1991-2020 Anomaly (°C)	Rank - warmest	Rank - coldest	Series length (yrs)
UK	8.6	-0.4	55	87	141
England	9.2	-0.6	58	84	141
Wales	8.7	-0.6	70	72	141
Scotland	7.7	-0.2	45	97	141
Northern Ireland	8.5	-0.4	68	74	141
Central England	9.2	-0.8	110	38	147

Mean temperature

Region	Meantemp (°C)	1991-2020 Anomaly (°C)	Rank - warmest	Rank - coldest	Series length (yrs)
UK	12.9	-0.4	64	78	141
England	14.0	-0.3	52	90	141
Wales	12.7	-0.7	81	61	141
Scotland	11.2	-0.5	77	65	141
Northern Ireland	12.4	-0.6	80	62	141
Central England	14.0	-0.6	217	150	366

Rainfall

Region	Rainfall (mm)	% of 1991-2020 Average	Rank - wettest	Rank - driest	Series length (yrs)
UK	55.1	71	134	56	189
England	34.1	52	159	31	189
Wales	48.1	52	153	37	189
Scotland	91.2	98	72	118	189
Northern Ireland	60.4	74	112	78	189
EWP (England and Wales)	33.8	48	229	31	259

Sunshine

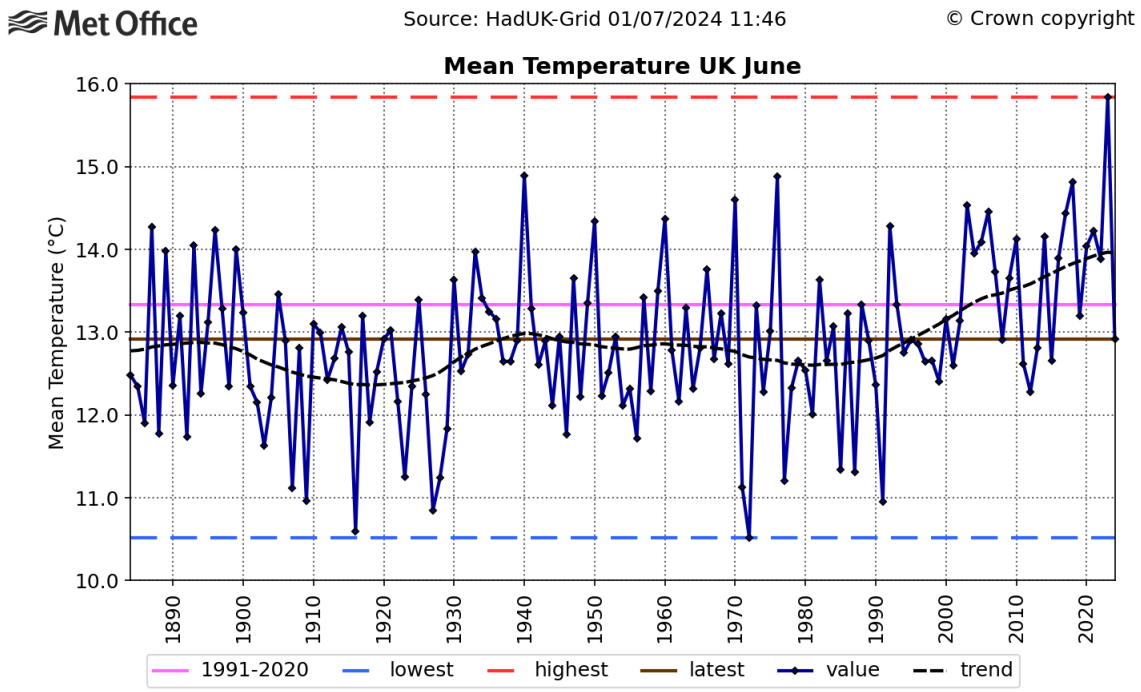
Region	Sunshine (hours)	% of 1991-2020 Average	Rank - sunniest	Rank - dullest	Series length (yrs)
UK	178.8	104	57	59	115
England	210.2	112	38	78	115
Wales	174.5	98	65	51	115
Scotland	138.9	95	82	34	115
Northern Ireland	112.3	75	106	10	115

Windspeed

Region	Windspeed (knots)	1991-2020 Anomaly (knots)	Rank - windiest	Rank - calmest	Series length (yrs)
UK	8.4	0.2	28	29	56
England	7.1	-0.4	39	18	56
Wales	7.9	-0.5	43	14	56
Scotland	10.8	1.4	10	47	56
Northern Ireland	8.1	0.5	21	36	56

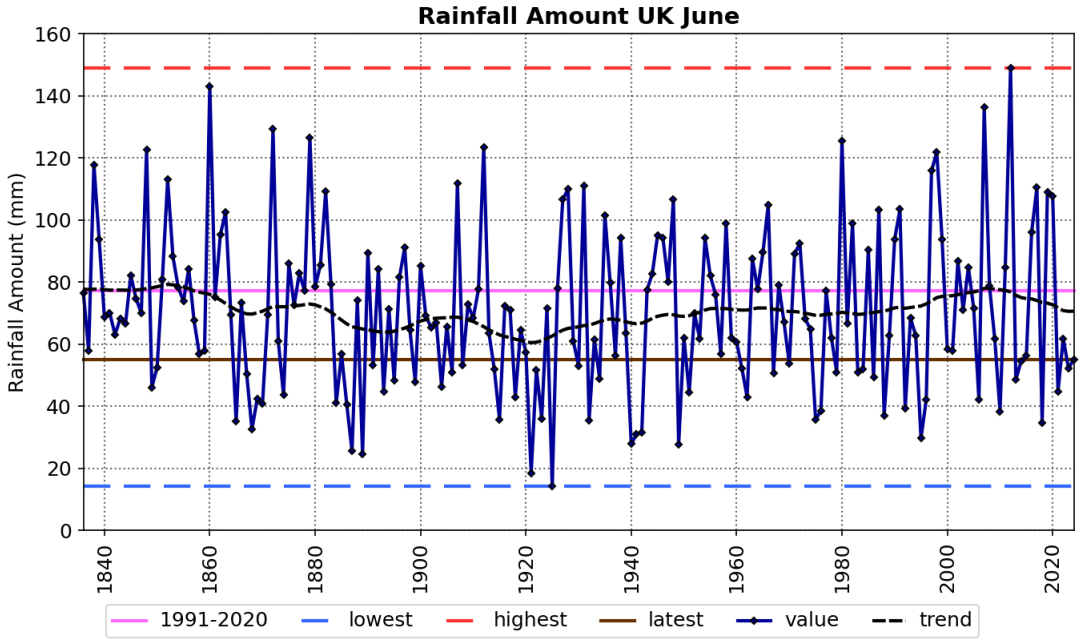
Monthly time-series

These charts show time-series for the UK for June for monthly mean temperature (from 1884), monthly rainfall (from 1836) and monthly sunshine (from 1919). The brown line shows the latest (2024) value. The hatched black line is a smoothing filter which shows the long-term trend. The tables below show statistics for the latest year, latest 10 years 2015-2024, the most recent 30-year climate reference period 1991-2020 and the 30-year baseline climate reference period 1961-1990.



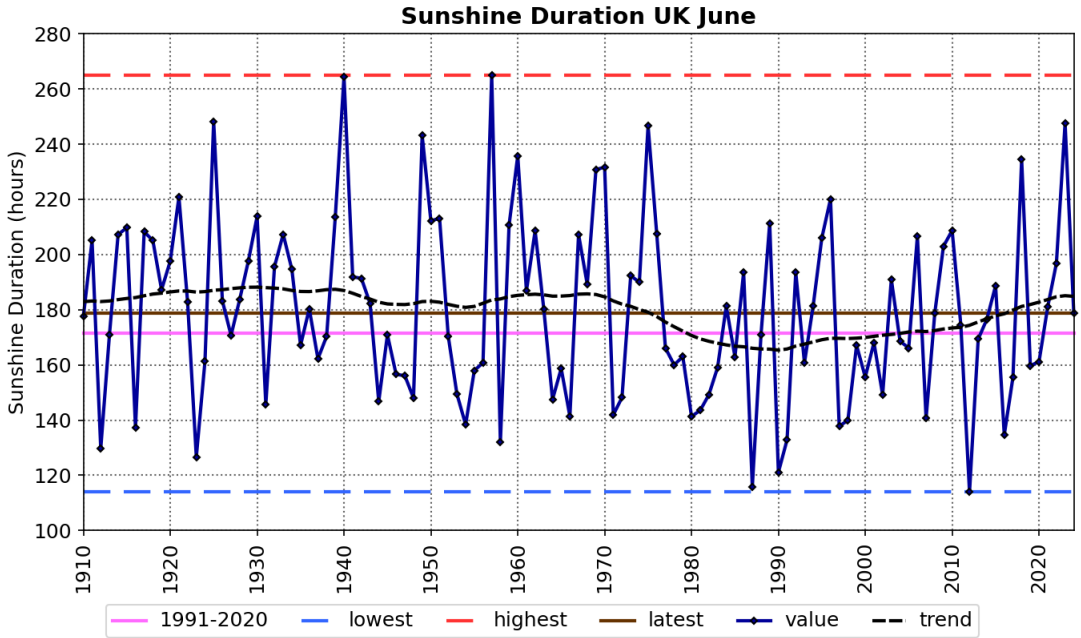
Period	1961-1990	1991-2020	2015-2024	2024
Meantemp (°C)	12.7	13.3	14.0	12.9

Met Office Source: HadUK-Grid 01/07/2024 11:46 © Crown copyright



Period	1961-1990	1991-2020	2015-2024	2024
Rainfall (mm)	70.5	77.2	72.8	55.1

Met Office Source: HadUK-Grid 01/07/2024 11:46 © Crown copyright

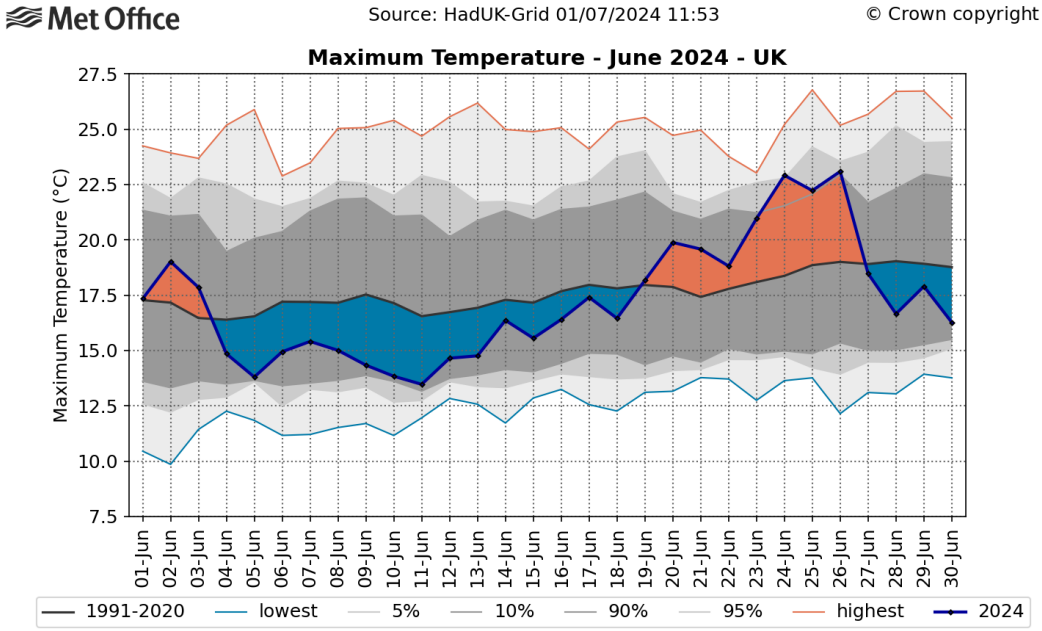


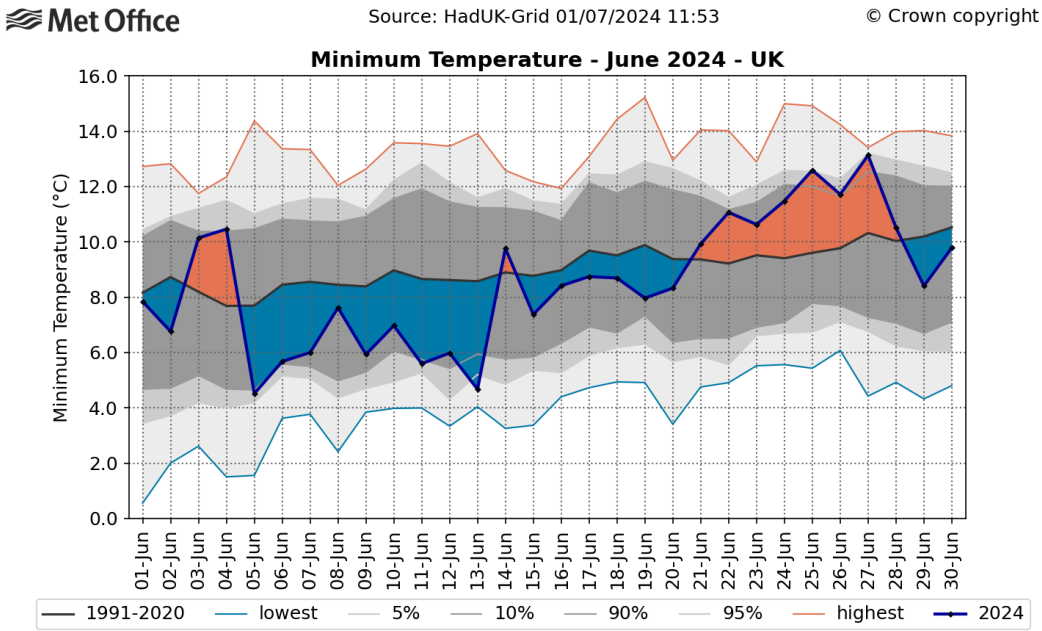
Period	1961-1990	1991-2020	2015-2024	2024
Sunshine (hours)	174.9	171.5	183.8	178.8

Daily time-series

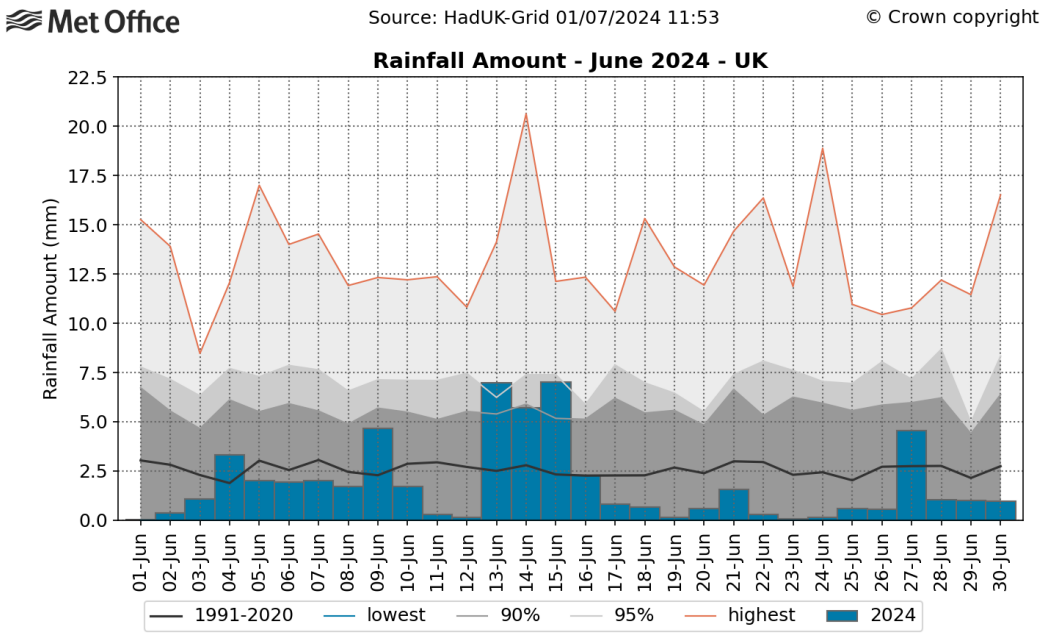
These charts show time-series of UK area-average daily maximum and daily minimum temperature and daily rainfall for each day of June 2024. The areas shaded in grey show the highest and lowest values in the daily temperature series (from 1960) and daily rainfall series (from 1891) together with percentiles and the 1991-2020 long term averages for each day. The rainfall accumulation chart shows the daily rainfall series as an accumulation through the month.

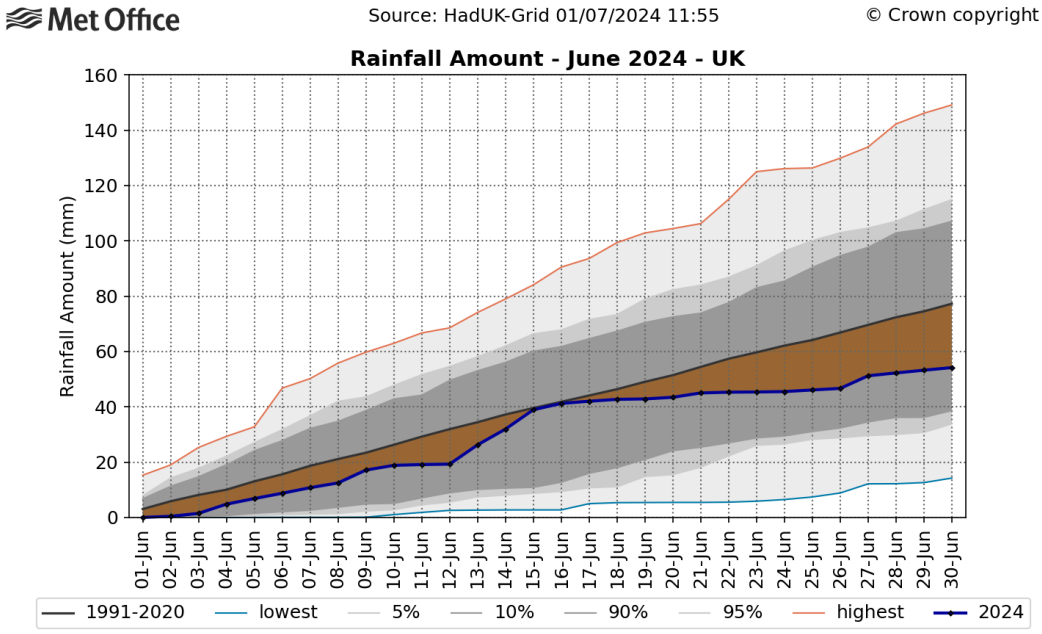
Daily maximum and daily minimum temperature





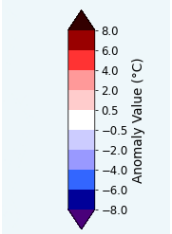
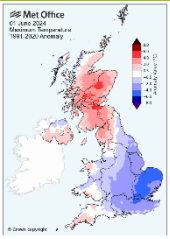
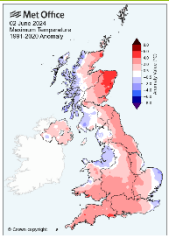
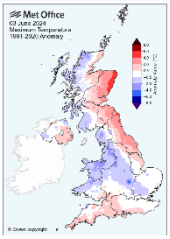
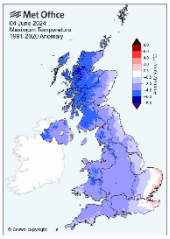
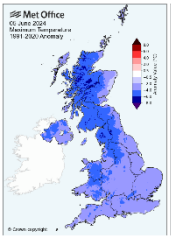
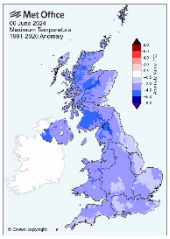
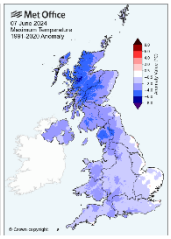
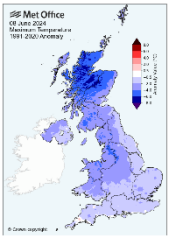
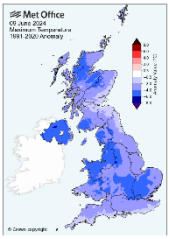
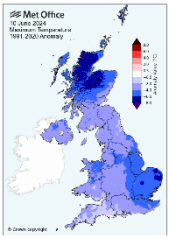
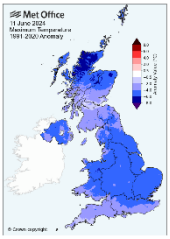
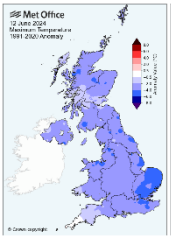
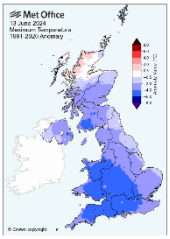
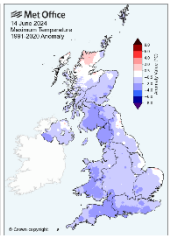
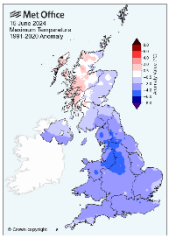
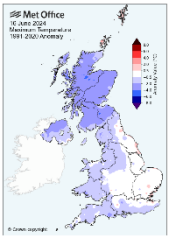
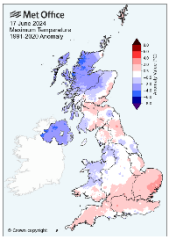
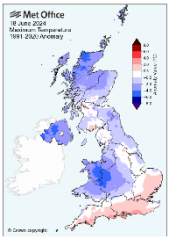
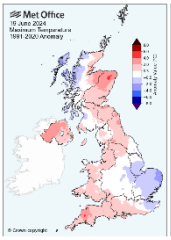
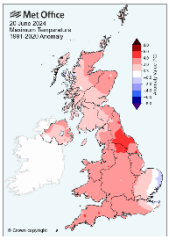
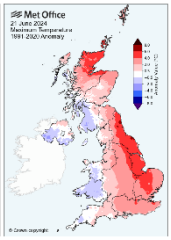
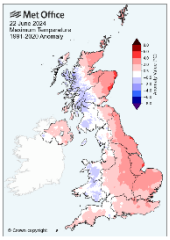
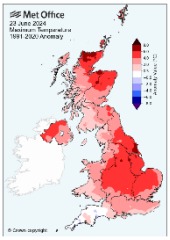
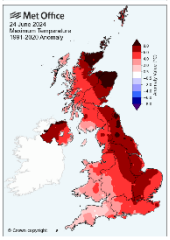
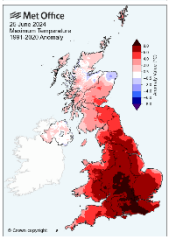
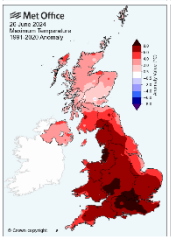
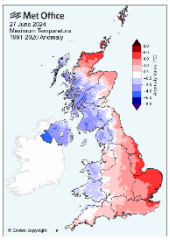
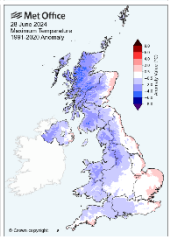
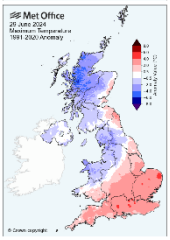
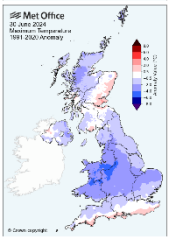
Daily rainfall and rainfall accumulation





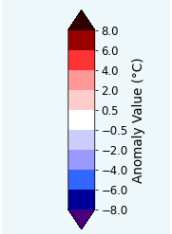
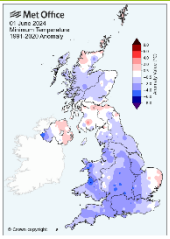
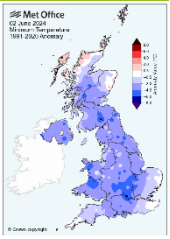
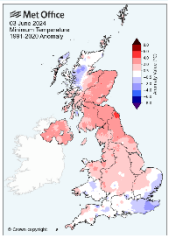
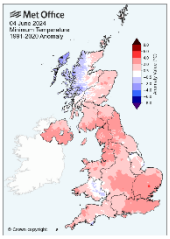
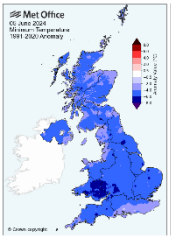
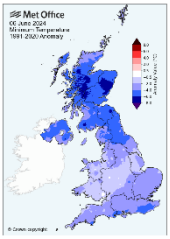
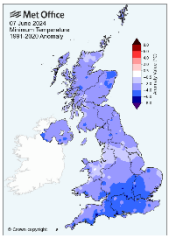
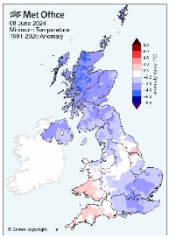
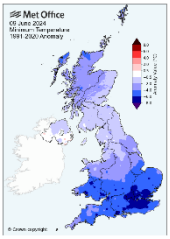
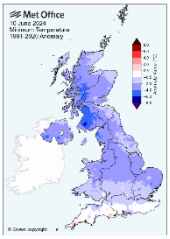
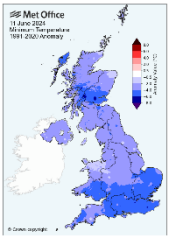
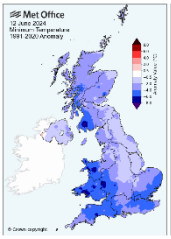
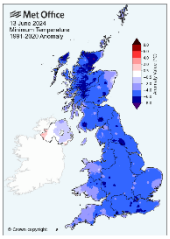
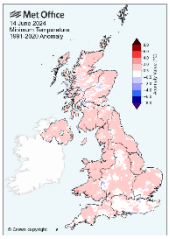
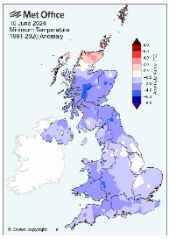
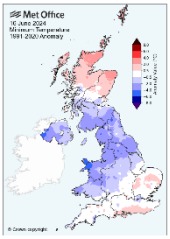
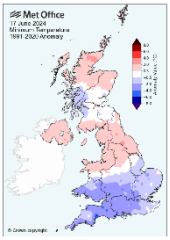
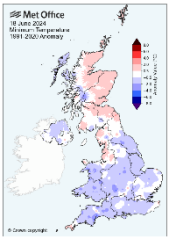
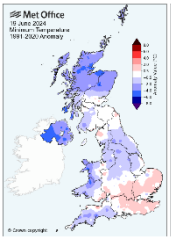
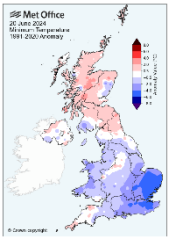
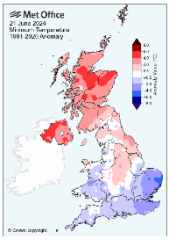
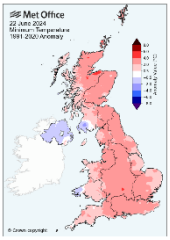
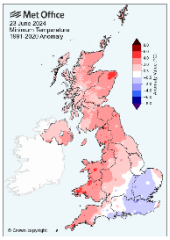
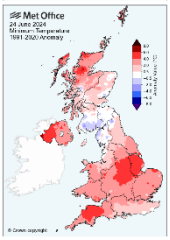
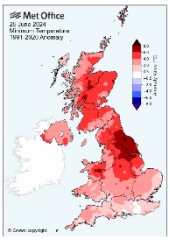
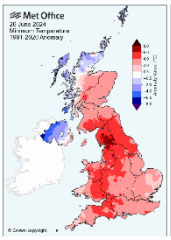
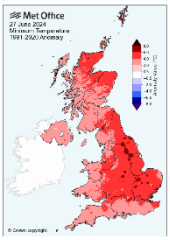
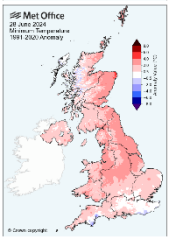
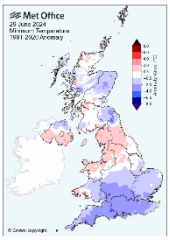
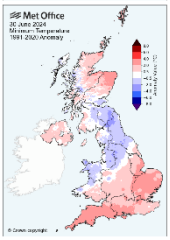
Daily maximum temperature maps - calendar view

These maps show daily maximum temperatures for each day of June 2024 as anomalies relative to the June 1991-2020 long term average. The daily maximum temperature is the maximum from 0900UTC on the day in question to 0900UTC the following day. Normally, the maximum occurs in the early afternoon.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
						
						
						
						
						

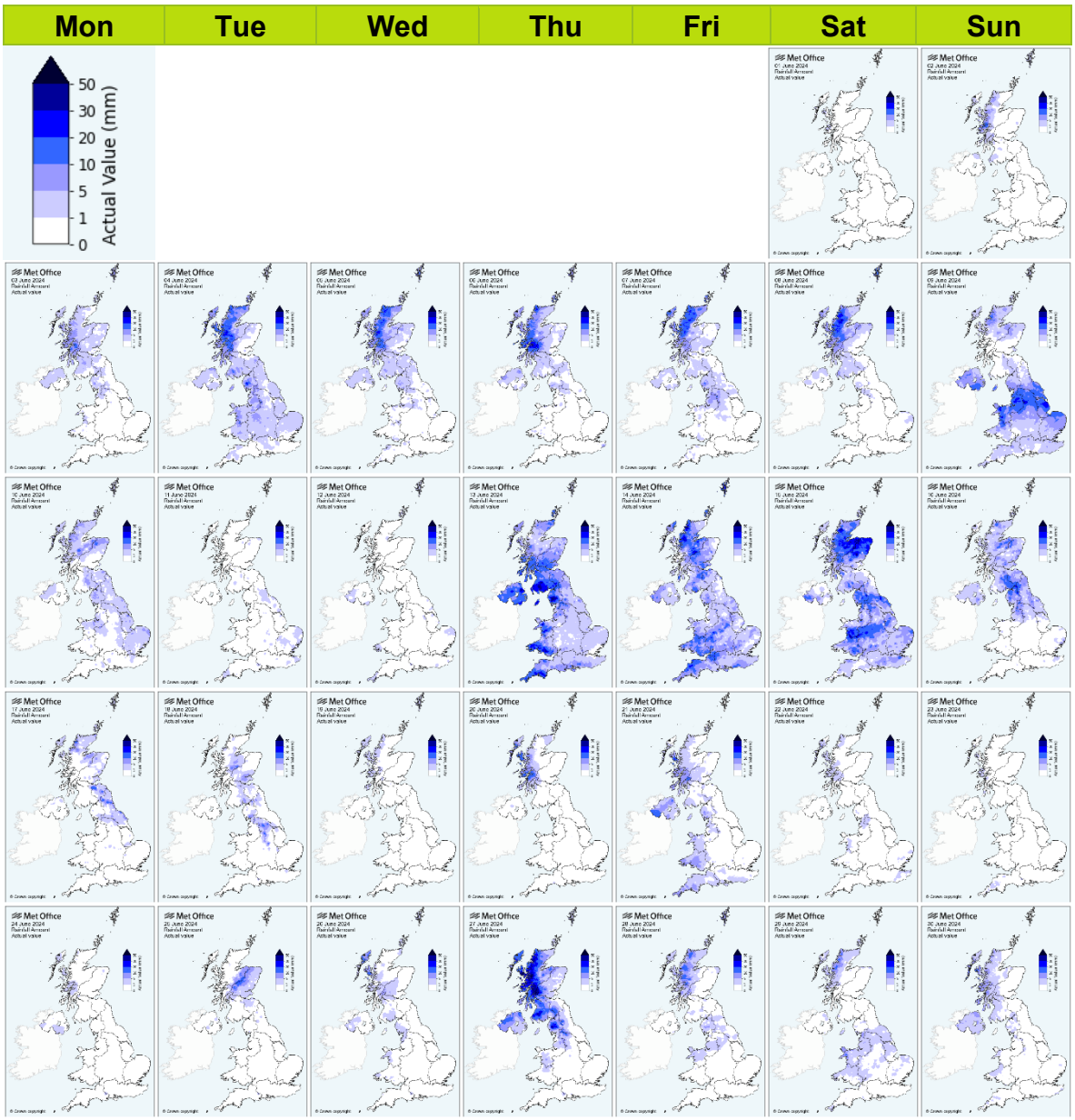
Daily minimum temperature maps - calendar view

These maps show daily minimum temperatures for each day of June 2024 as anomalies relative to the June 1991-2020 long term average. The daily minimum temperature is the minimum from 0900UTC the previous day to 0900UTC on the day in question. Normally, the minimum occurs in the early morning.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
						
						
						
						
						

Daily rainfall maps - calendar view

These maps show daily rainfall for each day of June 2024 as daily totals. The daily rainfall is the total from 0900UTC on the day in question to 0900UTC the following day.

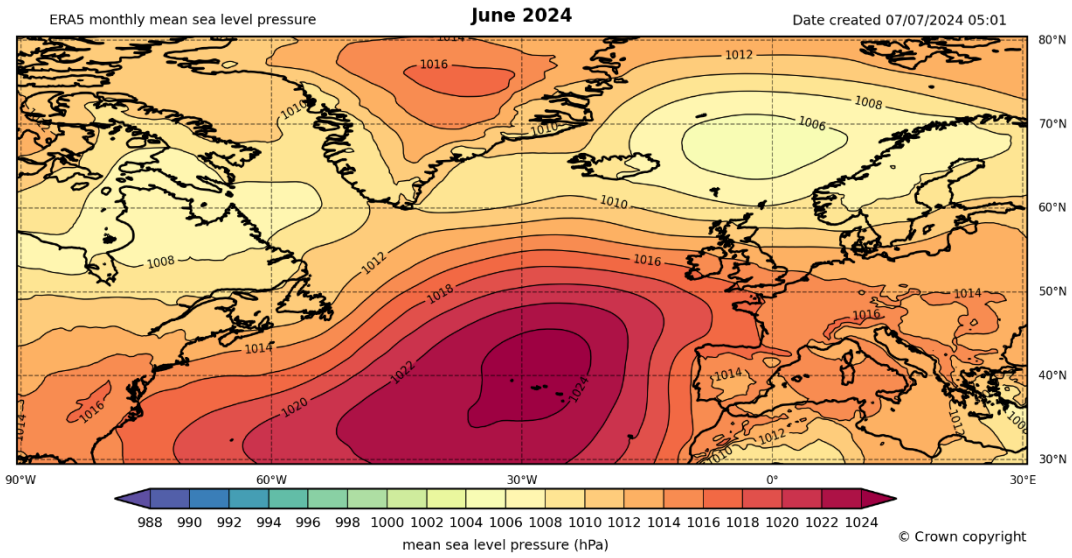


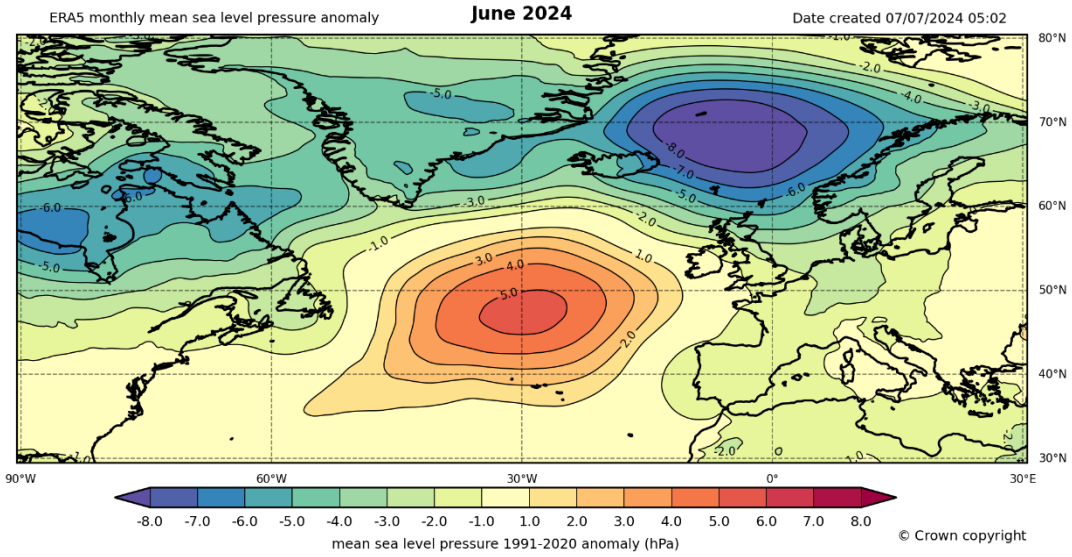
Monthly atmospheric circulation

Mean sea level pressure

These charts show the monthly mean sea level pressure for June 2024 for the UK and north Atlantic, based on the ERA5 reanalysis (Hersbach et al, 2019), both as actual values and as an anomaly relative to the June long term average. These charts provide an indication of the weather characteristics of the month overall i.e. whether the weather type has been generally settled (high pressure) or unsettled (low pressure) during the month.

June saw anomalously low pressure centred to the north-east of Iceland and high pressure in the mid-Atlantic, as the jetstream was pushed further north than usual.

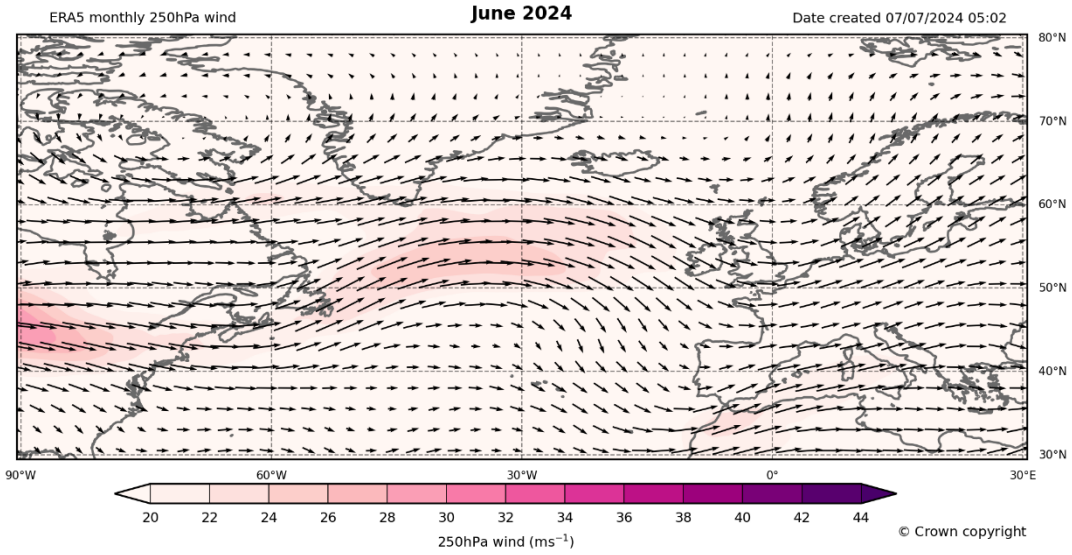


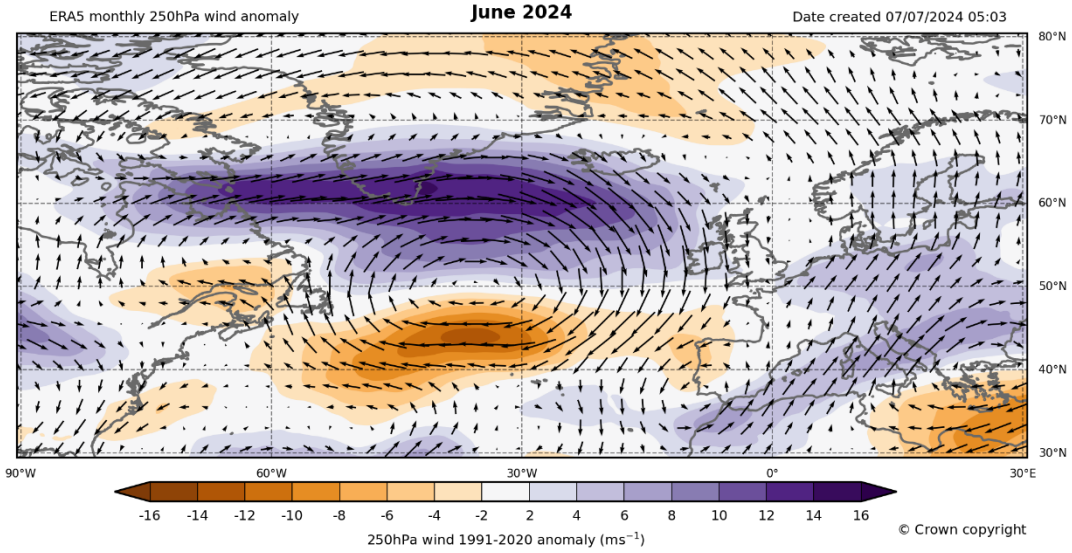


250hPa wind speed and direction

These charts show the monthly 250hPa wind speed and direction for June 2024 for the UK and north Atlantic, based on the ERA5 reanalysis (Hersbach et al, 2019), both as actual values and as an anomaly relative to the June long term average. This provides an indication of the mean strength and position of the jet stream compared to normal. The wind anomaly map shows shaded (scalar) wind speed anomalies with arrows as (vector) wind anomalies.

The jetstream across the Atlantic was displaced to the north of its usual path, to just south of Iceland. This resulted in an anomalously strong north-westerly flow across the UK.





Weather diary

- **Unseasonably cool, wet and windy at times, warmer later**

  A fine and settled start to the month thanks to high pressure centred to the west of the UK soon gave to way to a series of depressions coupled with a northerly airstream. From the 4th to the 10th, with winds coming from the north or northwest, maximum temperatures were held down in the low to mid-teens. A few places in the south of England just about managed to break 20 Celcius. Snow was reported on the Cairngorms on the 5th.

  There was a brief interlude, on the 11th and 12th of drier but still rather cool conditions, due to a ridge of high pressure but, once again, weather systems from the Atlantic won out bringing more cool, wet and windy weather to all regions. From the 13th to 17th, low pressure dominated, stalling over the UK, with all parts taking it in turns to experience either their wettest, windiest or coldest periods of the month. Frosts were reported in parts of Sutherland on the 13th, and Northern Ireland saw winds gusting in excess of 50mph with some places receiving between 25 and 50mm of rain. Western counties of England and south and west Wales saw similar figures between the 13th and 15th.

  Thankfully, by the 18th, although the weather remained generally unsettled, at least the maximum temperatures started to achieve the kind of values we expect at this time of year. By the 24th all regions had seen maximums soar into the high 20s Celsius, with parts of the southeast of England breaking the 30°C barrier.

  It wasn't to last though as an unseasonably deep depression crossed the north of Scotland between the 27th and 28th, noticeably cooling things down for northern counties of England, Northern Ireland and Scotland, with only the Midlands and southern England hanging onto the warmer temperatures.

Notes

The Met Office National Meteorological Library and Archive holds a near-continuous record of monthly weather reports from 1884, and this report forms a continuation of that series. The purpose of each report is to provide an overview of the weather conditions across the UK for that month. The emphasis is mainly based on observations from the surface network of weather stations. Climate series based on from data from these stations are used to provide long term context.

This summary was produced on 08/07/2024 09:00. The statistics are a provisional assessment of the observational data available at the time of production. Ongoing data receipt and quality assurance processes may result in subsequent updates to the statistics presented.

If you have any questions or feedback about this product, spot any data errors or omissions, or wish to obtain further data, please contact the Met Office.

For historical monthly weather reports please visit the Library and Archive.

- The land-surface observations presented in this report are from the Met Office official weather station network which includes both automatic weather stations and manual climate stations operated by volunteer observers. Rainfall data are from the official registered rain-gauge network which includes rain-gauges operated by a number of key partners including the Environment Agency, Scottish Environmental Protection Agency and Northern Ireland Water.
- The observations are carefully managed such that they conform to current best-practice observational standards as defined by the World Meteorological Organization (WMO). The observations also pass through a range of quality assurance procedures at the Met Office before application for climate monitoring.
- Daily and monthly maps, monthly statistics and monthly time-series are primarily based on the HadUK-Grid dataset of 1km resolution UK gridded climate data (Hollis et al, 2019). Monthly statistics from the monthly Central England temperature series 1659 (Manley, 1974) and England and Wales precipitation series from 1766 (Wigley et al, 1984) provide long term context.
- The monthly lightning activity map is based on data from the Met Office ATDnet (Arrival Time Difference Network) system. This is an automatic lightning location network comprising around ten lightning outstation sensors located across Europe.
- The monthly maps of mean sea level pressure and 250hPa wind speed and direction are based on the ERA5 reanalysis (Hersbach et al, 2019). ERA5 is the fifth generation ECMWF reanalysis for the global climate and weather for the past 4 to 7 decades. Reanalysis combines model data with observations from across the world into a globally complete and consistent dataset using the laws of physics.

Hersbach, H., Bell, B., Berrisford, P., Biavati, G., Horányi, A., Muñoz Sabater, J., Nicolas, J., Peubey, C., Radu, R., Rozum, I., Schepers, D., Simmons, A., Soci, C., Dee, D., Thépaut, J-N. (2019): ERA5 monthly averaged data on single levels from 1959 to present. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). https://doi.org/10.24381/cds.f17050d7

Hollis, D, McCarthy, MP, Kendon, M, Legg, T, Simpson, I. HadUK-Grid - A new UK dataset of gridded climate observations. Geosci Data J. 2019; 6: 151-159. https://doi.org/10.1002/gdj3.78

Manley, G. (1974), Central England temperatures: Monthly means 1659 to 1973. Q.J.R. Meteorol. Soc., 100: 389-405. https://doi.org/10.1002/qj.49710042511

Wigley, T.M.L., Lough, J.M. and Jones, P.D. (1984), Spatial patterns of precipitation in England and Wales and a revised, homogeneous England and Wales precipitation series. J. Climatol., 4: 1-25. https://doi.org/10.1002/joc.3370040102

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